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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re the Application of: Satoshi SANO et al.

Group Art Unit: 2677

Serial No.: 09/875,084

Examiner: Kimhung T. Nguyen

Filed: June 7, 2001

Confirmation No.: 6212

For: **OPTICAL SCANNING-TYPE TOUCH PANEL**

Attorney Docket Number: 010671

Customer Number: 38834

REPLY BRIEF

Mail Stop: **Appeal Brief – Patents**
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

July 18, 2006

In response to the Examiner's Answer mailed May 18, 2006, the following is the Appellants' Reply Brief.

In the Examiner's Answer, on page 3, line 1 through page 7, line 4, the Examiner repeats the rejections set forth in the final Office Action mailed June 29, 2005.

On page 7, line 5 through page 10, line 11 of the Examiner's Answer the Examiner provides a response to the arguments presented in the Appeal Brief filed on February 28, 2006. However, as discussed in detail below, the Examiner's response to the Appeal Brief fails to address the majority of the applicant's arguments set forth in the Appeal Brief.

Independent Claim 1

In the final Office Action mailed June 29, 2005, the Examiner relied on the arc shaped reflector 32 shown in Fig. 10 of **Caswell et al.** to teach the claimed mirrored deflecting unit having an asymmetrical shape about an optical axis, as recited in claim 1.

In the Appeal Brief, appellants argued that the **Caswell et al.** reference does not anticipate claim 1 for the following reasons: (1) The written description of **Caswell et al.** does not disclose or suggest that the arc shaped reflector 32 has an asymmetrical shape about an optical axis, and, more specifically, as stated in column 7, lines 5-8 of **Caswell et al.**, the written description discloses “an arc shaped reflector 32 with a *central* opening 33 serves the function of permitting light from the laser 6 to pass through the opening 33...” [emphasis added]; (2) The drawings do not disclose or suggest that the arc shaped reflector 32 has an asymmetrical shape about an optical axis. To the contrary, the drawings indicate that the arc shaped reflector 32 has a symmetrical shape about an optical axis based on a measurement of Fig. 10 of **Caswell et al.**; (3) The rejection is improper because the drawings do not clearly show the structure which is claimed. See Manual of Patenting Examining Procedure (MPEP) §2125, which states “Drawings and pictures can anticipate claims if they *clearly* show the structure which is claimed.” [emphasis added] *In re Mraz*, 455 F.2d 1069, 173 USPQ 25 (CCPA 1972); (4) The rejection is improper because the combination of the description of the opening 33 being in a central portion of the arc shaped reflector 32 and the drawing Fig. 10 showing that the opening 33 is in the center of the arc shaped reflector 32 reasonably teaches to one of ordinary skill in the art that the arc shaped reflector 32 has a *symmetrical shape* about the optical axis of the laser 6. See MPEP §2125,

which states “The description of the article pictured can be relied on, in combination with the drawings, for what they would reasonably teach one of ordinary skill in the art.”

In the Examiner’s Answer, the Examiner responds to the arguments regarding claim 1 as follows:

“The Examiner disagrees because in fig. 10, Caswell et al. discloses the two reflectors 32, each of them does not locate in the middle of the optical axis, thus the reflector 32 having an asymmetric shape about an optical axis.” (see Examiner’s Answer, page 7, lines 7-10)

Thus, the Examiner has not addressed any of applicant’s arguments regarding claim 1 and has simply concluded that the reflector 32 of **Caswell et al.** has an asymmetric shape about an optical axis. Moreover, it is noted that the Examiner’s characterization of the **Caswell et al.** reflector 32 is incorrect. Specifically, the Examiner states “Caswell et al. discloses the two reflectors 32, each of them....”. Contrary to the Examiner’s assertion, the reflector 32 disclosed by **Caswell et al.** is a *single* reflector having a central opening.

Dependent claims 3 and 4

With respect to claims 3 and 4, in the Appeal Brief, Appellants argued as follows: (1) The Examiner recognizes that **Caswell et al.** do not disclose or suggest a deflecting unit “wherein the shape of said deflecting unit is asymmetrical in a height direction” (claim 3) or a deflecting unit “wherein a height of said deflecting unit is substantially equal to a height of said optical scanning unit” (claim 4); (2) The only incentive or motivation offered by the Examiner for modifying the **Caswell et al.** reference to arrive at the invention recited in claims 3 and 4 is based on case law that the Examiner asserts holds “a change in size/shape is generally recognized as being within

the level of ordinary skill in the art' (see page 4, Item 5 of Office Action mailed June 29, 2005), citing *In re Rose*, 105 USPQ 237 (CCPA 1955) and *In re Reven*, 156 USPQ 679 (CCPA 1968); (3) The *Manual of Patent Examining Procedure* (MPEP) §2144.04 indicates that a change in size or proportion is not patentably distinct from the prior art only when the change in size or shape results in a device that would ***not perform differently*** from the prior art. Further, the MPEP indicates that a change in shape may be obvious if there is ***no significance*** to the change in shape; (4) In the invention recited in claims 3 and 4, the change in size and/or shape of the deflecting unit is significant in that the change in size and/or shape clearly results in performance that is different from the prior art. For example, as set forth on page 14, lines 21-25 of the present application, designing the shape of the deflecting unit (aperture mirror) such that it is asymmetrical in the height direction is preferable in creating a large light receiving area. Thus, the claimed invention (claims 3 and 4) clearly performs differently from the **Caswell et al.** device and is patentably distinct from the **Caswell et al.** device; (5) Claim 4 does not recite a mere change in size or shape. Claim 4 recites a height of the deflecting unit relative to a height of the optical scanning unit is the substantially the same. This results in the change in performance of the system, as discussed on page 15, lines 4-6 of the present application, and is not a mere change in size or shape; and (6) In view of the foregoing, there is no incentive or motivation for modifying the **Caswell et al.** reference and therefore a *prima facie* case of obviousness has not been established.

In the Examiner's Answer, the Examiner responds to the arguments regarding claims 3 and 4 as follows:

“Examiner respectively disagrees because in claim 1, Caswell et al. discloses in fig. 10, the shape of said deflecting unit (reflector 32) is asymmetrical in a scanning direction as discussed above. However, Caswell et al. does not disclose the shape of said deflecting unit is asymmetrical in a height direction (claim 3), or “wherein a height of said deflecting unit is substantially equal to a height of the optical scanning unit.” (claim 4). *It is obvious that the shape of the deflecting unit is asymmetrical in a scanning direction (claim 3), and shape of the deflecting unit having a height is equal to the height of the optical scanning unit (claim 4). Therefore, the two claims can applied to the case law if In re Rose, 105 USPQ 237 (CCPA 1995) and In re Reven, 156 USPQ 679 (CCPA 1968) that is change in size/shape.*” [emphasis added] (see Examiner’s Answer, page 7, line 15 – page 8, line 2).

First, the Examiner has not responded to any of the patentability arguments regarding claims 3 and 4 and has simply concluded that claims 3 and 4 are obvious in view of *In re Reven* and *In re Rose*. Second, the Examiner misinterprets claim 3, stating “it is obvious that the shape of the deflecting unit is asymmetrical in a scanning direction”. Contrary to the Examiner’s discussion, claim 3 recites that the “shape of said deflecting unit is asymmetrical in a height direction”.

Independent Claim 7

In the Appeal Brief, appellants argued that neither **Caswell et al.** nor **Brandt** disclose or suggest *the optical scanning unit provided with a protective film having a maximum reflectance at an angle of incidence corresponding to a scanning angle at which a quantity of reflected light is minimum.*

In the Examiner’s Answer, the Examiner responds to the arguments regarding claim 7 as follows:

“Examiner respectively disagrees because Brandt discloses in figures 5-6, a reflectance of an aluminum mirror substrate having SiO₂ protective

coating (protective film) and having the optimal thickness to be employed to minimize reflectance variations in the range of incident light beam scanning angles (that is the [quantity] of reflected light is minimum), thus, the protective film having maximum reflectance (see column 6, lines 26-47).”

It is submitted that the Examiner is reading into the **Brandt** reference elements that are not disclosed by the reference. Specifically, the Examiner apparently asserts that the teaching of minimizing reflectance variations in a range of incident light beam scanning angles corresponds to the claimed “*a scanning angle at which a quantity of reflected light is minimum*”. However, contrary to the Examiner’s assertion, **Brandt** teaches choosing a thickness of a coating on the polygon mirror 20 that minimizes reflectance variations in a range of incident light beam scanning angles (col. 6, lines 40-46) so that the intensity of the scanning beam does not vary. **Brandt** teaches nothing regarding maximizing reflectance at an angle of incidence corresponding to a scanning angle at which a quantity of reflected light is a minimum. The minimizing of reflectance variations in a range of incident light beam scanning angles taught by **Brandt** means that the reflectance is made uniform over a variety (i.e., a range) of different scanning angles. Contrary to the Examiner’s assertion, the minimizing of reflectance variations in a range of incident light beam scanning angles does not mean that the quantity of reflected light is a minimum.

Independent claim 6

With respect to claim 6, in the Appeal Brief Appellants argued, *inter alia*, that EP 0897161 does not disclose or suggest the relationship $d/2 + w < D \tan \delta$ between component optical members of an optical scanning-type touch panel, as recited in claim 6. More specifically,

appellants argued that the scan start angle δ is not specified in Fig. 3 of EP0897161 nor is it discussed in the disclosure. Furthermore, the dimensions of the beam width d , and the width w of the deflecting unit are also not clearly specified in the drawing nor are they discussed in the disclosure. The Examiner is relying on *only* the drawing figures to teach the claimed relationship $d/2 + w < D \tan \delta$. However, as set forth in the Manual of Patent Examining Procedure MPEP §2125, *drawings can anticipate claims only if they clearly show the structure which is claimed*. It is submitted that the drawings of EP0879161 do not clearly show the structure which is claimed.

The Examiner supports the rejection of claim 6 with a handwritten drawing that distorts the scanning start angle δ of actual Fig. 3 in EP 0897161 in order to make the drawing fit the equation $d/2 + w < D \tan \delta$. In other words, by making the scanning start angle δ large, $D \tan \delta$ is made large to satisfy the equation $d/2 + w < D \tan \delta$. This is improper under §102. Under §102, the Examiner must find all elements of the claim either expressly or inherently in the prior art reference. It is improper for the Examiner to supply dimensions or sizes of angles that are not taught or suggested by the reference.

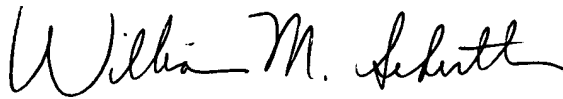
In the Examiner's Answer, the Examiner responds to the arguments regarding claim 6 as follows:

"Examiner also respectively disagrees because in fig. 3 of EP 0879161 shows a similar claimed invention, examiner can express the formula into figure 3 to satisfy the requirement of the claimed invention as discussed above."

Once again, the Examiner has not addressed Appellants' arguments regarding claim 6 and has simply concluded that the reference Fig. 3 of EP 0879161 discloses the invention recited in claim 3.

If this paper is not timely filed, appellants petition for an extension of time. The fee for any such extension may be charged to our Deposit Account No. 50-2866, along with any other additional fees, which may be required with respect to this submission.

Respectfully submitted,
WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP

A handwritten signature in black ink, reading "William M. Schertler". The signature is fluid and cursive, with the first name "William" and last name "Schertler" clearly legible, and "M." in the middle.

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